



Control of Adult Mosquitoes to Reduce Transmission of West Nile Virus

Why spray for mosquitoes?

Transmission of the West Nile virus (WNV) occurs through mosquito bites. Control of the mosquito population will help reduce transmission and spread of the virus. Birds infected by mosquito bites can carry the virus into areas that are currently virus-free. Mosquitoes feeding on these infected birds can then become vectors to transmit the virus to other birds, mammals (e.g., dogs, cats, horses), or humans. Reduction of mosquitoes can therefore reduce transmission of WNV at several different levels.

The life cycle of a mosquito consists of four distinct stages: egg, larva, pupa, and adult. Control of mosquitoes at each stage of development requires different pesticides with different methods of application. Mosquito spraying is targeted at adult mosquitoes and this fact sheet is intended to address questions related to the spraying of mosquitoes with "adulticides."

When could pesticide application occur?

Cities and towns in New Hampshire may spray for mosquitoes if such a decision is made based upon the presence of WNV in humans in the community.

Where and how could the pesticides be used?

Applications made on the ground may be made on foot, using backpack sprayers, or by vehicle, using ultra-low volume (ULV) sprayers mounted on trucks. Aerial applications will be considered as a method of last resort when it becomes evident that a spray program will need to be implemented that covers broader or more remote areas than can reasonably be addressed through ground applications.

How will I be notified if it is decided that spraying is necessary in my neighborhood?

Should spraying be deemed necessary, whoever holds the required permit to apply (typically the local municipalities) will alert people of the spraying schedule as early as possible. Likely forms of notification would be by best available means, which may include one or more of the following: notice(s) in the newspapers, announcements on the radio and/or television, or

notification by telephone or mail, etc. If the need to spray is identified, efforts will be made to initiate spraying as quickly as possible (possibly within 48 hours). The applicant is required by the Division of Pesticide Control to notify town officials and the public at least 24 hours in advance of spraying.

What pesticides will be used for mosquito spraying?

Applicators may use one of several different pesticide products for mosquito spraying. The specific agent will depend on a number of factors including application environment, immediate availability of the product, and cost. However, the pesticides of choice that are currently registered for this type of use in New Hampshire are primarily pyrethroid-based products. Pyrethroids are a group of synthetic pesticides similar to the natural pesticide pyrethrum (pyrethrins) produced by chrysanthemum flowers. Pyrethroids are more effective than the natural pyrethrins and they are effective against adult mosquitoes including the *Culex* species, which can transmit WNV.

**For more information or to report dead birds, call the
New Hampshire Department of Health and Human Services,
West Nile Virus Information line
1-866-273-NILE (6453)**

**For general information on pesticides,
please call the NH Department of Agriculture, Pesticides Division
at 1-603-271-3550.**

**For more information about potential health effects of pesticide exposure,
please call the NH Department of Health and Human Services,
Environmental and Occupational Health Section at
1-800-852-3345, ext. 4664, or 1-603-271-4664.**